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morton (W. J. G.)

C I R C U L A R.

MORTON'S LETHÉON.



DUTTON AND WENTWORTH, PRINTERS

No. 37, Congress Street, Boston.



## MORTON'S LETHEON.

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DEAR SIR:

As a general answer to your favor of concerning the new and valuable discovery, whereby pain is prevented in Dental and other surgical operations, I hasten to transmit the following extracts from the communication of Dr. H. J. Bigelow, one of the surgeons of the Massachusetts General Hospital, in this city, read before the Boston Society of Medical Improvement, Nov. 9th, 1846, and before the American Academy of Arts and Sciences, on the 3d of the same month.

You will observe, that the experiments referred to by Dr. B., were among the earliest to which spectators were admitted; and, although striking and conclusive in themselves, they are, if possible, more than equalled by the numerous operations daily made, under the use of the discovery, in this city, as well as in other places where I have granted licenses for the employment of it.

"IT has long been an important problem in medical science to devise some method of mitigating the pain of surgical operations. An efficient agent for this purpose has at length been discovered. A patient has been rendered completely insensible during an amputation of the thigh, regaining consciousness after a short interval. Other severe operations have been performed without the knowledge of the patients. So remarkable an occurrence will, it is believed, render the following details relating to the history and character of the process, not uninteresting.

"On the 16th of Oct., 1846, an operation was performed at the hospital, upon a patient who had inhaled a preparation administered by Dr. Morton, a dentist of this city, with the alleged intention of producing insensibility to pain. Dr. Morton was understood to have extracted teeth under similar circumstances, without the knowledge of the patient. The present operation was performed by Dr. Warren, and though comparatively slight, involved an incision near the lower jaw of some inches in extent. During the operation, the patient muttered, as in a semi-conscious state, and afterwards stated that the pain was considerable, though mitigated; in his own words, as though the skin had been scratched with a hoe. There was, probably, in this instance, some defect in the process of inhalation, for on the following day the vapor was administered to another patient with complete success. A fatty tumor of considerable size was removed, by Dr. Hayward, from the arm of a woman near the deltoid muscle. The operation lasted four or five minutes, during which time the patient betrayed occasional marks of uneasiness; but upon subsequently regaining her consciousness, professed not only to have felt no pain, but to have been in-

sensible to surrounding objects, to have known nothing of the operation, being only uneasy about a child left at home. No doubt, I think, existed, in the minds of those who saw this operation, that the unconsciousness was real; nor could the imagination be accused of any share in the production of these remarkable phenomena. \* \* \* \*

*The Remarks of the Patients.*—“A boy of 16, of medium stature and strength, was seated in the chair. The first few inhalations occasioned a quick cough, which afterwards subsided; at the end of eight minutes the head fell back, and the arms dropped, but owing to some resistance in opening the mouth, the tooth could not be reached before he awoke. He again inhaled for two minutes, and slept three minutes, during which time the tooth, an inferior molar, was extracted. At the moment of extraction, the features assumed an expression of pain, and the hand was raised. Upon coming to himself he said he had had a “first rate dream—very quiet,” he said, “and had dreamed of Napoleon—had not the slightest consciousness of pain—the time had seemed long;” and he left the chair, feeling no uneasiness of any kind, and evidently in a high state of admiration.

“A girl of 16 immediately occupied the chair. After coughing a little, she inhaled during three minutes, and fell asleep, when a molar tooth was extracted, after which she continued to slumber tranquilly during three minutes more. At the moment when force was applied she flinched and frowned, raising her hand to her mouth, but said she had been dreaming a pleasant dream and knew nothing of the operation.

“A stout boy of 12, at the first inspiration coughed considerably, and required a good deal of encouragement to induce him to go on. At the end of three minutes from the first fair inhalation, the muscles were relaxed and the pupil dilated. During the attempt to force open the mouth he recovered his consciousness, and again inhaled during two minutes, and in the ensuing one minute two teeth were extracted, the patient seeming somewhat conscious, but upon actually awaking he declared “it was the best fun he ever saw,” avowed his intention to come there again, and insisted upon having another tooth extracted upon the spot. \* \* \*

“The next patient was a healthy-looking, middle-aged woman, who inhaled the vapor for four minutes; in the course of the next two minutes, a back tooth was extracted, and the patient continued smiling in her sleep for three minutes more. Pulse 120, not affected at the moment of the operation, but smaller during sleep. Upon coming to herself, she exclaimed that “it was beautiful—she dreamed of being at home—it seemed as if she had been gone a month.” These cases, which occurred successively in about an hour, at the room of Dr. Morton, are fair examples of the average results produced by the inhalation of the vapor, and will convey an idea of the feelings and expressions of many of the patients subjected to the process. Dr. Morton states that, in upwards of two hundred patients, similar effects have been produced. The inhalation, after the first irritation has subsided, is easy, and produces a complete unconsciousness at the expiration of a period varying from two to five or six, sometimes eight minutes; its duration varying from two to five minutes; during which the patient is completely insensible to the ordinary tests of pain. The pupils in the cases I have observed have been generally dilated; but with allowance for excitement and other disturbing influences, the pulse is not affected, at least in frequency; the patient remains in a calm and tranquil slumber, and wakes with a pleasurable feeling. \* \* \* \*

“Two recent cases serve to confirm, and one I think to decide, the great utility of this process. On Saturday, the 7th Nov., at the Mass. General Hospital, the right leg of a young girl was amputated above the

knee, by Dr. Hayward, for disease of this joint. Being made to inhale the preparation, after protesting her inability to do so from the pungency of the vapor, she became insensible in about five minutes. The last circumstance she was able to recall was the adjustment of the mouth-piece of the apparatus, after which she was unconscious until she heard some remark at the time of seuring the vessels—one of the last steps of the operation. Of the incision she knew nothing, and was unable to say, upon my asking her, whether or not the limb had been removed. She refused to answer several questions during the operation, and was evidently completely insensible to pain or other external influences. This operation was followed by another, consisting of the removal of a part of the lower jaw, by Dr. Warren. The patient was insensible to the pain of the first incision, though she recovered her consciousness in the course of a few minutes.

"The character of the lethargie state, which follows this inhalation, is peculiar. The patient loses his individuality and awakes after a certain period, either entirely unconscious of what has taken place, or retaining only a faint recollection of it. Severe pain is sometimes remembered as being of a dull character; sometimes the operation is supposed by the patient to be performed upon somebody else. Certain patients, whose teeth have been extracted, remember the application of the extracting instruments; yet none have been conscious of any real pain. \* \* \* \*

"The duration of the insensibility is another important element in the process. When the apparatus is withdrawn at the moment of unconsciousness, it continues, upon the average, two or three minutes, and the patient then recovers completely or incompletely, without subsequent ill effects. In this sudden cessation of the symptoms, this vapor in the air tubes differs in its effects from the narcotics or stimulants in the stomach, and, as far as the evidence of a few experiments of Dr. Morton goes, from the ethereal solution of opium when breathed. Lassitude, headache and other symptoms lasted for several hours, when this agent was employed.

"But if the respiration of the vapor be prolonged much beyond the first period, the symptoms are more permanent in their character. In one of the first cases, that of a young boy, the inhalation was continued during the greater part of ten minutes, and the subsequent narcotism and drowsiness lasted more than an hour. \* \* \* \*

"It is probable that the vapor of the new preparation ceases early to act upon the system, from the facility with which it is exhaled.

"The process is obviously adapted to operations which are brief in their duration, whatever be their severity. Of these, the two most striking are, perhaps, amputations and the extraction of teeth. In protracted dissections, the pain of the first incision alone is of sufficient importance to induce its use; and it may hereafter prove safe to administer it for a length of time, and to produce a narcotism of an hour's duration. It is not unlikely to be applicable in cases requiring a suspension of muscular action; such as the reduction of dislocations or of strangulated hernia; and finally it may be employed in the alleviation of functional pain, of muscular spasm, as in cramp and colic, and as a sedative or narcotic.

"The application of the process to the performance of surgical operations, is, it will be conceded, new. \* \* \* \*

"It is natural to inquire with whom this invention originated. Without entering into details, I learn that the patent bears the name of Dr. Charles T. Jackson, a distinguished chemist, and of Dr. Morton, a skilful dentist, of this city, as inventors—and has been issued to the latter gentleman as proprietor." \* \* \* \*

The foregoing statements, which are only a portion of the communications of Dr. Bigelow, are alone sufficient, I presume, to enable you to form an opinion of the immediate and very great value of the invention to the afflicted or suffering, as well as to the surgical world. It is employed by, and has received, as you will perceive, the sanction of some of the most skilful and distinguished Dentists and Surgeons. The following are the statements of Drs. Warren and Hayward, of this city, who performed at the hospital the operations alluded to by Dr. B. and other operators, since the time mentioned by him :—

### INHALATION OF ETHEREAL VAPOR FOR THE PREVENTION OF PAIN IN SURGICAL OPERATIONS.

BY JOHN C. WARREN, M.D.

(Communicated for the *Boston Medical and Surgical Journal*.)

Application has been made to me by R. H. Eddy, Esq., in a letter dated Nov. 30th, in behalf of Dr. W. T. G. Morton, to furnish an account of the operations witnessed and performed by me, wherein his new discovery for preventing pain was employed. Dr. M. has also proposed to me to give him the names of such hospitals as I know of in this country, in order that he may present them with the use of his discovery. These applications, and the hope of being useful to my professional brethren, especially those concerned in the hospitals which may have the benefit of Dr. M.'s proposal, have induced me to draw up the following statement, and to request that it may be made public through your Journal.

The discovery of a mode of preventing pain in surgical operations, has been an object of strong desire among surgeons from an early period. In my surgical lectures I have almost annually alluded to it, and stated the means which I have usually adopted for the attainment of this object. I have also freely declared, that notwithstanding the use of very large doses of narcotic substances, this desideratum had never been satisfactorily obtained. The successful use of any article of the *materia medica* for this purpose, would therefore be hailed by me as an important alleviation to human suffering. I have in consequence readily admitted the trial of plans calculated to accomplish this object, whenever they were free from danger.

About five weeks since, Dr. Morton, dentist of this city, informed me that he had invented an apparatus for the inhalation of a vapor, the effect of which was to produce a state of total insensibility to pain, and that he had employed it successfully in a sufficient number of cases in his practice to justify him in a belief of its efficacy. He wished for an opportunity to test its power in surgical operations, and I agreed to give him such an opportunity as soon as practicable.

Being at that time in attendance as Surgeon of the Massachusetts General Hospital, a patient presented himself in that valuable institution a few days after my conversation with Dr. Morton, who required an operation for a tumor of the neck ; and, agreeably to my promise, I requested the attendance of Dr. M.

On October 17th, the patient being prepared for the operation, the apparatus was applied to his mouth by Dr. Morton for about three minutes, at the end of which time he sank into a state of insensibility. I immediately made an incision about three inches long through the skin of the neck,

and began a dissection among important nerves and blood-vessels, without any expression of pain on the part of the patient. Soon after, he began to speak incoherently, and appeared to be in an agitated state during the remainder of the operation. Being asked immediately afterwards whether he had suffered much, he said that he had felt as if his neck had been scratched ; but subsequently, when inquired of by me, his statement was, that he did not experience pain at the time, although aware that the operation was proceeding.

The effect of the gaseous inhalation in neutralizing the sentient faculty, was made perfectly distinct to my mind by this experiment, although the patient during a part of its prosecution exhibited appearances indicative of suffering. Dr. Morton had apprized me, that the influence of his application would last but a few minutes after its intermission ; and as the operation was necessarily protracted, I was not disappointed that its success was only partial.

On the following day, October 18th, an operation was done by Dr. Hayward, on a tumor of the arm, in a female patient at the Hospital. The respiration of the gas was in this case continued during the whole of the operation. There was no exhibition of pain, excepting some occasional groans during its last stage, which she subsequently stated to have arisen from a disagreeable dream. Noticing the pulse in this patient before and after the operation, I found it to have risen from 80 to 120.

Two or three days after these occurrences, on meeting with Dr. Charles T. Jackson, distinguished for his philosophical spirit of inquiry, as well as for his geological and chemical science, this gentleman informed me that he first suggested to Dr. Morton the inspiration of ether, as a means of preventing the pain of operations on the teeth. He did not claim the invention of the apparatus, nor its practical application ; for these we are indebted to Dr. Morton.

The success of this process in the prevention of pain for a certain period being quite established, I at once conceived it to be my duty to introduce the apparatus into the practice of the Hospital, but was immediately arrested by learning that the proprietor intended to obtain an exclusive patent for its use. It now became a question, whether, in accordance with that elevated principle long since introduced into the medical profession, which forbids its members to conceal any useful discovery, we could continue to encourage an application we were not allowed to use ourselves, and of the components of which we were ignorant. On discussing this matter with Dr. Hayward, my colleague in the Hospital, we came to the conclusion, that we were not justified in encouraging the further use of this new invention, until we were better satisfied on these points. Dr. Hayward thereupon had a conversation with Dr. Morton, in consequence of which Dr. M. addressed to me a letter. In this he declared his willingness to make known to us the article employed, and to supply assistance to administer the inhalation whenever called upon. These stipulations he has complied with.

This being done, we thought ourselves justified in inviting Dr. Morton to continue his experiments at the Hospital, and elsewhere ; and he, directly after, Nov. 7th, attended at a painful and protracted operation performed by me, of the excision of a portion of the lower jaw, in which the patient's sufferings were greatly mitigated. On the same day, an amputation of the thigh of a young woman was performed, at the Hospital, by Dr. Hayward. In this case, the respiration of the ethereal vapor appeared to be entirely successful in preventing the pain of the operation ; the patient stating, afterwards, that she did not know that any thing had been done to her.

On Nov. 12th, an operation for the removal of a tumor from the arm of a young woman was performed by Dr. J. Mason Warren. The vapor was administered for three minutes, when the patient became unconscious; the operator then proceeded, the inspiration being continued. Standing myself on one side of the patient, while the operator was on the other, so entirely tranquil was she, that I was not aware the operation had begun, until it was nearly completed.

On Nov. 21st, an operation was performed by Dr. J. Mason Warren, on a gentleman, for the removal of a tumor, which covered nearly the half of the front of the right thigh. The patient lying upon a bed, the vapor was administered by Dr. Morton, in the presence of Drs. Charles T. Jackson, Reynolds, J. V. C. Smith, Flagg, Gould, Shurtleff, Lawrence, Parsons, Briggs, and others. After he had breathed the vapor for three minutes, his head fell, and he ceased to respire it, but presently awaking, the inhalation was renewed till he again appeared insensible. The operation was then commenced. At the first stroke of the knife he clapped his hand on the wound, but I immediately seized and held it during the remainder of the operation, though not without some difficulty, in consequence of his struggles. The operation was completed in two or three minutes, and the patient remained quietly on his back, with his eyes closed. On examination, the pupils were found to be dilated; the pulse was not materially affected. After he had lain about two minutes, I roused him by the inquiry, "How do you do to-day?" to which he replied, "Very well, I thank you." I then asked what he had been doing. He said he believed he had been dreaming; he dreamed that he was at home, and making some examination into his business. "Do you feel any pain?" "No." "How is that tumor of yours?" The patient raised himself in bed, looked at his thigh for a moment, and said, "It is gone, and I am glad of it." I then inquired if he had felt any pain during the operation, to which he replied in the negative. He soon recovered his natural state, experienced no inconvenience from the inhalation, was remarkably free from pain, and in three days went home into the country.

In all these cases, there was a decided mitigation of pain; in most of them, the patients, on the day after the operation, and at other times, stated, that they had not been conscious of pain. All those who attended were, I think, satisfied of the efficacy of the application in preventing, or, at least, greatly diminishing the suffering usual in such cases. The phenomena presented in these operations afford grounds for many interesting reflections, but it being my principal intention, at this time, to give a simple statement of facts, I shall not pursue the subject further, but close with two or three remarks:—

1st. The breathing of the ethereal vapor appears to operate directly on the cerebral system, and the consequent insensibility is proportionate to the degree of cerebral affection.

2d. Muscular power was for the time suspended in some cases, in others its loss was partial, and in one instance was scarcely sensible. The great relaxation of muscular action, produced by a full dose of the application, leads to the hope that it may be employed, with advantage, in cases of spasmodic affection, both by the surgeon and by the physician.

3d. The action of the heart is remarkably accelerated in some cases, but not in all.

4th. The respiration is sometimes stertorous, like that of apoplexy.

All these changes soon pass off without leaving any distinct traces behind them, and the ordinary state of the functions returns. This has been the course of things in the cases I have witnessed, but I think it quite probable, that so powerful an agent may sometimes produce other

and even alarming effects. I therefore would recommend, that it should never be employed, except under the inspection of a judicious and competent person.

Let me conclude by congratulating my professional brethren, on the acquisition of a mode of mitigating human suffering, which may become a valuable agent, in the hands of careful and well-instructed practitioners, even if it should not prove of such general application as the imagination of sanguine persons would lead them to anticipate.

BOSTON, DEC. 3, 1846.

BOSTON, DECEMBER 7, 1846.

Dear Sir :

In compliance with your request, I will briefly state my experience of the effects of the gas introduced into practice by Dr. Morton, and administered for the purpose of lessening the pain of surgical operations.

I have operated on four patients who had inhaled this gas ; two of these cases are noticed by Dr. H. J. Bigelow, in his article on the subject. In all of them the gas was administered by Dr. Morton.

The first case was the removal of a tumor from the arm of a woman ; the second, the amputation of the limb of a girl, 20 years of age, above the knee ; the third, the removal of the breast of a lady, in private practice ; and the fourth was the same operation, which I did on Saturday last, at the Hospital.

In the three first cases, the patients were apparently insensible and unconscious during the operation ; they have since repeatedly assured me that they were so ; no ill consequences followed the inhalation of the gas ; they are all now nearly, if not quite well, and their recovery has been, I think, more rapid than under ordinary circumstances ; which I attribute to their having escaped the shock of the operation.

The fourth patient seemed to be conscious during the operation ; answered questions and appeared to suffer ; yet she says that she did not, and was not aware of what was done, till it was nearly all over. She has thus far been very comfortable, more so, I should say, than patients usually are in the same time after this operation.

I remain, very respectfully, yours,

GEO. HAYWARD.

*R. H. Eddy, Esq.*

And the subjoined extracts are from a letter of Dr. Peirson, of Salem, who performed the important operations, of which he speaks, under the administration of the invention by Dr. Fish, dentist of the same city, to whom I have granted the license to use it in Essex County.

" DEAR SIR,—The two following cases, occurring in my practice the past week, are of interest as supporting the claims to confidence of Dr. Morton's anodyne compound : —

" CASE I.—Nov. 19th. An Irish girl, under 20 years of age, in attempting to step into the cars at Hamilton, while they were in motion, fell, with her arm upon the track, and had a compound, comminuted fracture at the elbow, from the wheel of the car. At about 9 in the evening, I amputated in the middle of the humerus. The operation lasted a little

longer than if done by daylight, although it was a flap operation and quickly executed. Three vessels were tied. Dr. Fisk, dentist, of this city, accompanied me and caused the patient to inhale the vapor of the compound, about three minutes before the operation commenced. By this time she appeared to have yielded entirely to its influence, and became pale, silent and perfectly passive and manageable, whereas she had before exhibited evidence of great physical suffering and uncontrollable grief. Before the arteries were all tied, she appeared to be returning to consciousness, when, on offering the apparatus to her mouth, she seized it with avidity, respiration rapidly, and soon seemed to relapse into the unconscious state. It was thus renewed four or five times before she was placed in bed. Her own statement is that she suffered no pain during the operation, that she was asleep, and when she awoke she breathed again of what was offered to her and fell asleep again—that she remembers to have done this three times. She says she did not know what we were doing to her, but in her sleep she thought she had got a reaping-hook in her arm, and that she heard the noise of sawing wood. She says she was not sensible of any thing till she was laid in bed, when she became quite talkative, and evidently somewhat excited. She slept some hours during the night. On dressing the stump on the third day, she made a violent outcry at the slightest pain. I was convinced that her statements with regard to her freedom from pain during the operation, were to be believed.

" II.—Nov. 21st. An intelligent tanner, about 30 years old, had, with a fracture of both bones in the middle of the left leg, his ankle crushed by the cars engaged in building the Salem and Methuen Rail-road. I amputated the leg just below the knee. The patient respired the vapor under Dr. Fisk's directions. He says he was not conscious of feeling any pain—and after the operation was finished and the ligatures applied, his consciousness returned, and, with great apparent sincerity, he asked *if his limb was taken off*. He says, though he felt no pain, he was conscious of the presence of those around him, and he was obedient to the directions given him. The operation was performed at about 3, P. M., and the stump was dressed at about 9, when, he says, the pain of a few sutures far exceeded that of the operation.

" In both these cases, the pulse became somewhat accelerated after the operation, the countenance assumed a vacant expression, although in the first case there was working of the brows, and the pupils were dilated. They both appear to be doing well, and exhibit no symptoms worthy of note.

Salem, Nov. 24th, 1846.

Respectfully yours,

A. L. PEIRSON.

*Postscript.—November 25th, 1846.*

" Yesterday, I made further trial of the ethereal vapor, upon a middle-aged female, from whom I removed an adipose tumor, by an incision four inches long over the clavicle and scapula. She was an unimpressible subject, and was less perfectly under the influence of the vapor than the others, but she was entirely bewildered and not able to realize the nature of what we were doing to her. She was much more quiet than patients usually are, although the dissection was somewhat protracted, by the dipping down of the tumor into the supra spinal fossa of the clavicle, and confinement by fascia. She says she felt no pain, and did not evince any perception of the puncture of the needle in dressing the wound—a sensation which usually calls forth complaint, as it is commonly unexpected.

" From the results I have seen at the Massachusetts General Hospital, and in my own practice, I am led to expect the following advantages from its exhibition :—

" 1st. Uniformity of its effects, unlike any mode of intoxication by stimulants in the stomach, or respiration of nitrous-oxyde gas. My three patients were as unlike in age, temperament, and habits, as could well be imagined, yet all exhibited the same appearance of passive endurance.

" 2d. There was no instinctive or voluntary resistance, which is so embarrassing to an operator. This, next to its power of preventing the perception of pain, is the greatest merit claimed for it.

" 3d. The securing the patient from the severity of the great shock which a capital operation inflicts on the sufferer. It was quite noticeable, in all the patients I have seen, that there was none of that extreme depression which sometimes follows a severely painful impression on the nervous system.

" 4th. Its effects pass off rapidly, and, as far as I know, no bad results follow.

" 5th. It can be repeated several times during the operation, except the mouth or jaws are the parts to be operated on. The repetition of the dose is always sought by the patients with avidity.

" 6th. The last and most important of its effects, is, that it either wholly annuls pain, or destroys the consciousness of it, so that it is not remembered; and thus the sentiment of fear is wholly obliterated. The patient appears to have been dreaming, and in the second case said that "he was in a distinct existence" (i. e., distinct from his former experience), thus illustrating the theory of double consciousness.

" These are recommendations enough to ensure it a fair trial among the humane and enlightened members of our profession. \* \* \* \*

" Dr. Morton and Dr. Jackson, at least, are entitled to the hearty thanks of the profession for their discovery, and the liberal manner in which they have offered it to all the subjects of surgical operations, both in and out of the Hospital. \* \* \* \*

" These gentlemen are entitled to the credit of having made it, for the first time, perfectly available to the suffering, and submitted it to the test of those competent to decide on its merits, without being content to rest its pretensions on non-professional credulity or popular notoriety.

A. L. PIERSON."

Salem, Nov. 26th, 1846.

It is also gratifying for me to be able to submit the following subjoined extract upon the subject, from the address of the Hon. Edward Everett, LL.D., President of Harvard University, at the opening of the new Medical College, of Boston, Nov. 6, 1846.

" I am not sure that since these remarks were delivered, a discovery has not been announced, which fully realizes the predictions of the text;—I allude to the discovery of a method of producing a state of temporary insensibility to pain, by the inhalation of a prepared vapor. A full account of this discovery is given in a paper, by Dr. Henry J. Bigelow, in the Boston Medical and Surgical Journal, for 18th of November, 1846. \* \*

" I witnessed a very successful instance of the application of the prepared vapor, on the 18th of November; and was informed at that time by Dr. Morton, that he had employed it in several hundred cases of dentistry. It has also been made use of with entire success at the Massachusetts General Hospital, and elsewhere in Boston, in capital operations of surgery. The few cases of failure may perhaps be ascribed to irregularities in the process of inhalation, or to peculiarities of temperament or constitution on the part of the patient.

"I understand that great confidence is placed in this discovery, by the most distinguished members of the medical profession of this vicinity; and that they are disposed to regard it as an effectual method of inducing complete insensibility under the most cruel operations, by means easily applied, entirely controllable, and productive of no subsequent bad consequences. It seems not easy to overrate the importance of such a discovery."

I could multiply certificates, and give you accounts of cases almost without number; keeping, as I do, a record of them at my office. But it is unnecessary. For, from the foregoing, I think you will readily conclude, that the extraordinary discovery of preventing pain in Dental and other surgical operations, has at last been made, and the use of it secured for the benefit of the human family.

It is now a matter of history, that the patient can submit, not only to Dental operations, but the reduction of dislocations, removal of tumors and the severest amputations,—without fear, consciousness or suffering; and that the Dentist and Surgeon can each perform the most arduous duties of his profession, with a certainty, a facility and satisfaction, hitherto unknown. In fact, the patient escapes the great shock to the nervous system, which are incident to all other modes practised in surgery.

The following is a Circular, which I have found it necessary to issue, as a caution both to patients and those who have attempted, or may endeavor to infringe, on my legal rights.

*"Important information for the public at large.—GENERAL CIRCULAR.—* The peculiar circumstances of the case, requiring that the subjoined information should be fully made known at this time, the same is now published.

*"PUBLIC CAUTION.—*Whereas Letters Patent of the United States have been duly granted for the new and valuable invention, whereby Dental, and other Surgical operations may now be performed without pain or suffering, or any injurious results to the patient; and certain unprincipled persons have, in the face of Law and Justice, without any license, instructions, or authority from me whatever, used my name and attempted to pirate said invention, endangering, from their want of skill and knowledge upon the subject, the lives of those whom they have persuaded to undergo their unwarrantable experiments:

"And whereas every person endeavoring, without such license, instructions, and authority from me, to use my name or pirate said invention, either by stealth or otherwise, and every person submitting to dental or other surgical operations, under such attempts and pretenders; or directly or indirectly aiding or abetting in any infringements of my rights secured by said Letters Patent, thereby renders himself liable in his person and property to the certain inconvenience and expense of prosecutions and damages at law.

"Now, therefore, on the score of humanity, as well as for the protection of my own rights, I do hereby give this public notice; and warn all

persons against making my apparatus or using my said invention or name, without my free License, Instructions, and authority; or in any manner lending themselves to the unprincipled and illegal employment of the same; as it is alike my duty and determination to hold every such offender strictly accountable, in his person and estate, for all damages under the laws, and for every violation of my Letters Patent, or infringement upon my property and interests in said invention. At the same time, I would publicly announce that I am now prepared to dispose of licenses or make arrangements so that every respectable Dentist and Surgeon, or other suitable person can obtain for his patients the benefit of or secure himself full instructions and authority, to use said invention, upon just and reasonable terms; upon such terms indeed, as must prove altogether less expensive to the purchaser, than it will probably cost him in time and money, to undertake to defend himself in the Courts for infringements on my rights in the premises—to say nothing of the dishonesty, dishonor, or disgrace, which invariably attaches itself to every individual who attempts to appropriate to himself, in secret or otherwise, that which is not only **NOT HIS OWN**, but which belongs "**in LAW, EQUITY, AND IN FACT,**" solely to *another*, his neighbor, or fellow citizen.

" Aware that this invention is an extraordinary one, and of very great importance, conferring as it does, a blessing heretofore unheard of upon the human race, inasmuch as by means of it, the afflicted or suffering, may now submit, without pain, or injurious results, to the severest Dental and other Surgical operations, necessary for the preservation of health and life; I am particularly desirous, that my invention should not be abused, entrusted to ignorant or improper hands, or applied to nefarious purposes.

" I therefore recommend that no individual should subject himself to the use of it under any operator, unless the patient learn beforehand, that such operator is really and duly licensed, instructed, and authorized to administer the same; which can be ascertained in every ease by merely requesting such operator to exhibit his License; and which License every one empowered to employ my apparatus and invention, possesses in WRITING, duly attested, under my own hand and seal.

" For terms and further particulars, apply to 19 Tremont Row.

W. T. G. MORTON."

Boston, Nov. 26. 1846.

It was deemed advisable to proceed in a quiet way with the invention at first, in order, among other reasons, that Letters Patent for the discovery might be properly secured in foreign nations. But I am now fully prepared to dispose of licenses to use my invention and apparatus, in any part of the country, upon the following general terms:—

#### TERMS FOR DENTISTS.

In cities over 50,000, inhabitants, -	-	\$300 for five years.
" " " 40,000 and less than 50,000,	250	" " "
" " " 30,000 " " " 40,000,	200	" " "
" " " 20,000 " " " 30,000,	150	" " "
" " " 10,000 " " " 20,000,	100	" " "
" " " 5,000 " " " 10,000,	75	" " "
" " " " " 5,000,	50	" " "

For two rights, 25 per cent. discount.

" three " 33 $\frac{1}{3}$  " " "

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### SURGEONS' LICENSES FOR FIVE YEARS.

25 per cent. on all charges made for performing operations, wherein the discovery is used. Fifteen dollars to be paid down, which will include Apparatus, a bottle of the Preparation, instruction, &c. The party licensed, to keep a correct account of all operations, the names of the parties operated on, and to forward the same to me; also, to pay me as often as once in three months.

Infraction of agreement to be a forfeiture of the license, at the option of the licensor.

Satisfactory security for payment of license fees, to be given.

The subscriber is prepared to give and receive propositions for Agencies to dispose of Rights.

W. T. G. MORTON,

ESTABLISHMENT OF DRS. N. C. KEEP & W. T. G. MORTON,

*No. 19, Tremont Row, and 74, Boylston Street, Boston, Mass.*

N. B. As I do not wish to derive remuneration from persons in destitute circumstances, and only look for proper compensation from those able to make it, it is proper for me to add that I have given the gratuitous use of the improvement for the benefit of the poor and afflicted, at the Massachusetts General Hospital, and intend to give the advantage of it to every charitable hospital for the service of the indigent and sick.

 All letters addressed to me must be prepaid, to ensure their being taken from the office.

C. H. MORTON







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